

## ABSTRACT OF THE DISCLOSURE

Provided is a technique making it possible to improve the high-frequency power gain of an LDMOS. The distance from the surface of a passivation film covering electrode pads to the rear surface of a silicon substrate is set into 200  $\mu\text{m}$  or less, or a trench of 2  $\mu\text{m}$  or more thickness in which an insulating film or a conductor is embedded is made between a region where a p type impurity is diffused when a  $p^+$  type source penetrating layer is formed and the channel region of a third LDMOS, so as to extend from the front surface of a semiconductor layer toward a silicon substrate. This trench restrains the  $p^+$  type source penetrating layer from spreading to the channel region, thereby lowering the inductance or the resistance of the source and improving the high-frequency power gain.